

REMARKS

Upon entry of the above amendment, claims 1, 7, 8, and 9 will have been amended, and claim 10 will have been newly added. In view of the herein contained amendments and remarks, Applicant respectfully requests reconsideration and withdrawal of the outstanding rejections together with allowance of all pending claims.

Initially, Applicant thanks the Examiner for indicating that claims 7 and 8 are objected to and would be allowable if rewritten to overcome the claim objections in the Official Action. These claims have been rewritten in the form suggested by the Examiner. Thus, in view of the amendments made herein, Applicant submits that independent claim 7, and dependent claim 8, are each in condition for allowance.

In the Official Action, the Examiner rejected claims 1-3 and 9 under 35 U.S.C. §102(a) as being anticipated by KAMIKUBO '029 (U.S. Patent No. 6,178,029). In addition, the Examiner rejected claims 4-6 under 35 U.S.C. §103(a) as being unpatentable over KAMIKUBO '029 in view of KAMIKIBO '164 (U.S. Patent No. 6,115,164).

Applicant respectfully traverses the above rejections and submit that they are inappropriate with respect to the claims pending in the present application. In particular, Applicant submits that the rejections are improper as KAMIKUBO

‘029 or KAMIKIBO ‘164, taken alone or in combination, fail to disclose the combination of features as recited in the claims.

KAMIKUBO ‘029 has the goal of decreasing separation in the scanning direction between two beams that are not intended to be shifted at all. For this purpose, in order to compensate for 36 μm of lateral “shift” caused by lateral chromatic aberration in a non-achromatic $f\theta$ lens, a truncated prism 25 is introduced to provide an opposite effect and bring the beams into alignment, *i.e.*, ideally 0 μm of lateral shift at the detector. Two problems are overcome: (1) the $f\theta$ lens’s lateral chromatic aberration at the detector is ideally 100% compensated (Fig. 5 becomes Fig. 2); and (2) “climbing” separation caused by the same lateral chromatic aberration is centered/halved (Fig. 6 becomes Fig. 3).

To the extent that the lens system 18 causes lateral chromatic aberration, without the truncated prism 25, the result is Figs. 5 and/or 6 - no alignment in the scanning direction at the detector or drawing area. With the truncated prism, the result is Fig. 2 (alignment on the detector) and Fig. 3 (centered, but essentially still not aligned on the drawing area).

Although the claim language “directed to” of the present invention would always have been understood by one of skill in the art to be most pertinent at the surface in issue (*i.e.*, “directed to” the detector or the drawing area), with the present amendment, Applicant has clarified that the relevant “shift” or

“alignment” occurs on the incident surface of the detector or drawing area.

Accordingly, while the scope of the claim remains the same because the meaning is the same, the present amendment is believed to clarify matters.

KAMIKUBO ‘029 does not disclose any structure in which laser beams incident on the imaging area are aligned with respect to one another in a scanning direction, while the laser beams incident on a beam detector are shifted with respect to one another in the scanning direction, as recited in claims 1 and 9. KAMIKUBO’029 discloses essentially the opposite (with the prism 25), or no alignment at all (without the prism 25).

To the extent that the Examiner relied upon a combination of portions of the KAMIKUBO ‘029 disclosure including the trivial case P3 in Fig. 3, and/or a mid-stream condition of the beams L0 and L1 shown in Fig. 1, Applicants earnestly believe that such a combination would be considered to extend beyond the bounds of reasonable interpretation. In any case, Applicants also believe that the present amendment, without narrowing claim scope, overcomes this interpretation.

Thus, in view of the arguments herein, Applicant submits that independent claims 1-3 and 9 are in condition for allowance.

With respect to dependent claims 4 through 6, Applicant further submits that dependent claims 4-6 are allowable on their own merit, although they are also

allowable because they depend either directly or indirectly on independent claim 1, which Applicant has shown to be allowable.

In this respect, Applicant briefly notes that KAMIKUBO '029 considers the use of a diffraction grating in a manner that teaches away from KAMIKUBO '164. Fig. 4, Col. 7 and 8 of KAMIKUBO '029 describe the manner in which a diffraction grating is used, *i.e.*, only on a separate element outside the drawing area. Applicant submits that not only does KAMIKUBO '029 teach away from the combination of KAMIKUBO '029 and '164 proposed by the Examiner, but this combination would not have a reasonable expectation of success, even for the Examiner's reasons.

Additionally, Applicant submits new claim 10 for the Examiner's consideration. Independent claim 10 is believed to be allowable at least because it recites that a converging lens element includes a first area that increases separation of laser beams in the scanning direction in order to improve separate detection of each laser beam by the synchronizing signal beam detector, and a second area that does not increase separation of the laser beams in the scanning direction in order to maintain aligned imaging during exposure of an imaging area of a surface to be scanned. Applicant believes that this is not shown in the prior art of record.

Thus, in view of the amendments and arguments herein, Applicant submits that independent claims 1, 7, 9, and 10 are in condition for allowance. Applicant

further submits that dependent claims 2-6 and 8 are allowable on their own merit, as well as because they depend either directly or indirectly on independent claims 1 or 7, which Applicant has shown to be allowable.

Thus, it is respectfully submitted that all of the claims in the present application are clearly patentable over the references cited by the Examiner, either alone or in combination, and an indication to such effect is respectfully requested, in due course.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the outstanding rejections of the claims, as well as an indication of the allowability of each of the claims, including newly submitted claim 10, in view of the herein-contained remarks.

SUMMARY AND CONCLUSION

Applicant believes that the present application is in condition for allowance, and respectfully request an indication to that effect. Applicant has amended the claims to enhance clarity and argued their allowability. Accordingly, reconsideration of the outstanding Official Action and allowance of the present application and all the recited claims therein are respectfully requested and now believed to be appropriate.

The amendments to the claims, which have been made in this amendment, have not been specifically noted to overcome a rejection based upon the prior art and should be considered to have been made for a purpose unrelated to patentability. Accordingly, no estoppel should be deemed to attach thereto.

Should the Examiner have any questions, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,
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